WANTED

Master Thesis in Chemistry and Polymer Technology

Process development for starch hydrolysis

CHASE is seeking a skilled and motivated young scientist willing to work on future proof topics dealing with sustainability and circular economy. You will be part of a multi-disciplinary team and acquire first-hand information on your selected topic and beyond.

We are offering positions for students with a finished BSc degree in the field of Chemistry, Physics, Polymer- or Process Engineering for pursuing their diploma/master thesis on a part-time basis (10 to 20h/week), limited to 12 months, to strengthen our team at the headquarters in Linz with immediate entry.

CHASE is a European Research and Technology Organization for Chemical Systems Engineering with its headquarters in Austria. We enable companies in the chemical process industry to make their production more energy-efficient, more resource-saving and more sustainable.

This master thesis focuses on developing a new process for the hydrolysis of a biopolymer. Based on existing literature and available methods a thorough understanding of the behaviour of processed starch properties shall be investigated. Depending on the accuracy and precision of the acquired data, a model of key properties shall be described to enable the simulation of the system throughout a range of process parameters and reactor designs.
The project starts with this feasibility study, followed by the build-up of in-depth understanding of the system, leading to a pilot plant design, based on the model predictions. The research project aims at enhancing energy efficiency and product quality aspects compared to the state-of the art processes.

We are looking forward to hearing from you: personal@chasecenter.at
Reference number: 023
Application: until 15.01.2026

CHASE your future

You will contribute to the following tasks:

- Describe and optimize a biopolymer hydrolysis setup
- Ensure reproducibility of the setup/processing and sample collection
- Analyze samples on molecular weight, their optical and rheological properties
- Study modeling aspects of acquired properties and collaborate with experts
- Implement new analytical methods for monitoring hydrolysis progress

Your expertise:

- Passion for process engineering and chemistry and setting-up chemical experiments
- Experience in chemical technology and analytical methods described above
- Benefit: first experience in data acquisition & analysis and data modeling
- Good analytical and problem-solving skills
- Independent and structured workflow
- Effective communication skills in both English and German

CHASE your career

We are committed to providing a framework for your professional growth:

- Work alongside academic professionals to enhance your expertise in relevant techniques in chemistry, process engineering, modelling and simulation.
- Earn a competitive salary while making impactful contributions to innovative research. The expected monthly salary is EUR 2.407,00 (on a basis of 40h/week).
- Play a key role in advancing industrial relevant production processes by developing and optimizing cutting-edge hydrolysis methods for biopolymers.

For further information, please contact:
Gunnar Spiegel, Area Manager - Circular Process Streams
gunnar.spiegel@chasecenter.at

We look forward to receiving your application (cover letter, CV, academic certificates, employment references), including the reference number of the job posting, to the following email address: personal@chasecenter.at

By submitting your application documents, you expressly consent to the transmission of your application documents to the partners involved in CHASE.

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www.chasecenter.at